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Wind Protection and Planting Date Affect Snapbean Growth and Yield [ABSTRACT]

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Wind Protection and Planting Date Affect Snapbean Growth and Yield

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The effects of windbreak shelter on growth, total, and marketable yield of snapbeans were evaluated during 1994 and 1995. Plantings of 'Strike' and 'Rushmore' were made at roughly 2-week intervals in exposed plots and plots protected by tree windbreaks. Air and soil temperature, relative humidity, wind speed and direction were monitored continuously and averaged hourly. Wind speed in shelter was 36% and 43% that of open field wind speed in 1994 and 1995 respectively. Air and soil temperatures were higher in sheltered areas. Sheltered plants had significantly higher total dry weight and leaf area index, and significantly greater total internode lengths than exposed plants. For each year, sheltered plant means for both total and marketable seasonal yields were significantly higher compared to exposed plants. Mean pod yields were significantly affected by planting date and cultivar. 'Rushmore' produced significantly higher total and marketable yields than 'Strike'. The two cultivars responded similarly to sheltered and exposed production environments. Shelterbelts can increase total and marketable yields, with greatest increases early and late in the growing season, an additional advantage since market prices tend to be higher at these times.